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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Herbert Lifka

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

WILLIAMS, JOSEPH L

ART UNIT

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2889

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,931	Applicant(s) LIFKA ET AL.	
	Examiner Joseph L. Williams	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-14 and 20-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-14,20-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment and response filed on 3/16/2009 has been entered and overcomes the rejections to the claims.

Claim Objections

1. Claim 3 objected to because of the following informalities: The term "he" should be read "The". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, 10, 12-14, 20-22, 26-28 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Song et al. (EP 1278244), of record by Applicant.

Regarding claim 1, Song ('244) teaches in figures 1-3 and the corresponding text an encapsulation structure for a display device, comprising: a dielectric sealing structure (400-600) that seals protruding structures (200 and 300), the dielectric sealing structure being non-planar and conforming to a shape of the protruding structures; and stabilization layer (700a-700c) located over the dielectric sealing structure to form a planar surface.

Regarding claim 2, Song ('244) teaches the encapsulation wherein said stabilization layer is of a polymeric material (see paragraph 0044-0045).

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Regarding claim 3, Song ('244) teaches the encapsulation structure wherein said sealing structure comprises a first layer (400, paragraph 0032) of a first dielectric material and a second layer (500, paragraph 0035) of a second dielectric material.

Regarding claim 4, Song ('244) teaches the sealing structure comprises a third layer (600) of a third dielectric material (paragraph 0038).

Regarding claim 5, Song ('244) teaches the third dielectric material is the same as said first dielectric material (see paragraphs 33 and 40 where Song teaches the first and third sealing structure layer can be composed of a dielectric acrylate compound).

Regarding claim 9, Song ('244) teaches the encapsulation structure wherein an essentially cavity-free interface is formed between said stabilization layer and said sealing structure.

Regarding claim 10, Song ('244) teaches the thermal expansion coefficient of the stabilization layer is essentially the same as the thermal expansion coefficient of the sealing structure.

Regarding claim 12, Song ('244) teaches the encapsulation structure is transparent.

Regarding claim 13, Song ('244) teaches the encapsulation structure wherein said stabilization layer is of a non-polymeric material (700b-700c).

Regarding claim 14, Song discloses the encapsulation structure according to claim 13, wherein said non-polymeric material (700c and paragraph 0049) is an inorganic material.

The limitation "cured" makes this a product by process claim. Initially, with respect to claims a **"product by process"** claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15. See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554, does not deal with this issue); *In re Fitzgerald* 205 USPQ 594, 596 (CCPA); *In re Marosi et al* , 218 USPQ 289 (CAFC); and *In re Thorpe et al*, 227 USPQ 964 (CAFC, 1985) all of which make it clear that it is the patentability of the final product per se which must be determined in a **"product by process"** claim, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above case law makes clear.

Regarding claim 20, Song ('244) teaches the display device is an OLED display.

Regarding claim 21, Song ('244) teaches the display device comprises protruding structures (barrier 200) with negative slopes which forms shadow regions.

Regarding claim 22, Song ('244) teaches a method for manufacturing an encapsulation structure for a display device comprising the acts of depositing a dielectric sealing structure that seals protruding structures, the dielectric sealing structure being non-planar and conforming to a shape of the protruding structures; and depositing a stabilization layer over the dielectric sealing structure to form a planar surface.

Regarding claim 26, Song ('244) teaches the display device is an OLED display.

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Regarding claim 27, Song ('244) teaches a display device comprising an encapsulation structure.

Regarding claim 28, Song ('244) teaches a display device obtainable by the method according to claim 22.

Regarding claim 31, Song ('244) teaches the act of selecting materials for the dielectric sealing structure and stabilization layer such that the materials have substantially equal thermal expansion coefficients.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 7, 11, 23, 24, 25, 29, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song et al. (EP 1278244) in view of Graff et al. (US 2002/0125822), both of record by Applicant.

Regarding claim 6, Song ('244) teaches all of the claimed limitations except for the first dielectric material is selected from the group comprising silicon nitride, aluminum nitride and any mixture thereof, and wherein said second dielectric material is selected from the group comprising silicon oxide, silicon oxide fluoride, titanium oxide, tantalum oxide, zirconium oxide, hafnium oxide, aluminum oxide and any mixture thereof.

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Further regarding claim 6, Graff ('822) teaches an environmental barrier material layers for an organic EL device comprised of, in part, dielectric materials selected from the group comprising silicon nitride, aluminum nitride and any mixture thereof, and wherein said second dielectric material is selected from the group comprising silicon oxide, silicon oxide fluoride, titanium oxide, tantalum oxide, zirconium oxide, hafnium oxide, aluminum oxide and any mixture thereof for the purpose of preventing deterioration caused by permeation of oxygen and water vapor (see paragraph 0034).

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the dielectric materials of Graff in the encapsulation layer of Song for the purpose of preventing deterioration caused by permeation of oxygen and water vapor.

Regarding claim 7, Song ('244) teaches all of the claimed limitations except for the dielectric material is selected from the group comprising silicon oxide, silicon oxide fluoride, titanium oxide, tantalum oxide, zirconium oxide, hafnium oxide, aluminum oxide and any mixture thereof, and wherein said second dielectric material is selected from the group comprising silicon nitride, aluminum nitride and any mixture thereof.

Further regarding claim 7, Graff ('822) teaches an environmental barrier material layers for an organic EL device comprised of, in part, dielectric materials selected from the group comprising silicon oxide, silicon oxide fluoride, titanium oxide, tantalum oxide, zirconium oxide, hafnium oxide, aluminum oxide and any mixture thereof, and wherein said second dielectric material is selected from the group comprising silicon nitride,

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aluminum nitride and any mixture thereof for the purpose of preventing deterioration caused by permeation of oxygen and water vapor (see paragraph 0034).

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the dielectric materials of Graff in the encapsulation layer of Song for the purpose of preventing deterioration caused by permeation of oxygen and water vapor.

Regarding claim 11, Graff ('822) teaches the thickness of the stabilization layer (decoupling layer (125)) is at least 0.1 μm (see paragraph 27).

The reason for combining is the same as for claim 6 above.

Regarding claim 23, Song ('244) teaches all of the limitations except for the stabilization layer comprising depositing a curable composition and curing the curable composition.

Further regarding claim 23, Graff ('822) teaches in paragraph 0043 a method of making a stabilization layer for an encapsulated EL device comprised of, in part, depositing a curable composition and curing the curable composition for the purpose of preventing deterioration caused by permeation of oxygen and water vapor.

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the cured composition layer of Graff in the encapsulation layer of Song for the purpose of preventing deterioration caused by permeation of oxygen and water vapor.

Regarding claim 24, Graff ('822) teaches that the curing is thermal curing.

The reason for combining is the same as for claim 23 above.

Regarding claim 25, Graff ('822) implies that the layers can be deposited by inkjet printing (see paragraph 0042).

The reason for combining is the same as for claim 23 above.

Regarding claim 29, Graff ('822) teaches that the dielectric sealing structure comprises silicon oxide fluoride.

The reason for combining is the same as for claim 6 above.

Regarding claim 30, Graff ('822) teaches that the stabilization layer comprises Indium.

The reason for combining is the same as for claim 6 above.

Regarding claim 32, since Graff ('822) discloses several methods of depositing the dielectric sealing layers, the depositing temperature appears to be an obvious choice in design, which one of ordinary skill in the art could determine without undo experimentation.

The reason for combining is the same as for claim 23 above.

Response to Arguments

4. Applicant's arguments with respect to claims 1-7, 9-14, and 20-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph L. Williams/
Primary Examiner, Art Unit 2889